| Facility | Actual Average Daily Flow, AADF (MGD) | Actual TN (mg/l) | Actual TP (mg/l) |
|---|---|---|---|
| City of Red Lodge | 0.68 | 19.5 | 2.88 |
| City of Sidney | 0.71 | 33 | 3.3 |
| City of Deer Lodge | 1.2 | 7.3 | 0.84 |
| City of Choteau | 0.47 | 12 | 1.8 |
| Town of Whitehall | No data | infrequent discharge | infrequent discharge |
| City of Cut Bank | 0.22 | infrequent discharge | infrequent discharge |
| Town of Joliet | 0.053 | 2.87 | 2.4 |
| Town of Bridger | 0.046 | 17 | 3.6 |
| Town of Chester | 0.108 | No data | No data |
| City of Harlowton | 0.097 | No monitoring for TN. Monitor for TKN, nitrite + nitrate | 4.87 |
| Town of Ekalaka | 0.062 | No data | No data |
| City of Malta | 0.2 | infrequent discharge | infrequent discharge |
| Town of Three Forks | 0.345 | 8.65 | 1.28 |

| | | | |
|---|---|---|---|
| Town of Ryegate | No Discharge | No data | No data |
| Town of Wibaux | 0.12 | No data | No data |
| Town of Superior | 0.026 | 5.7 | 4.6 |
| City of White Sulphur Springs | 0.08 | No data | No data |
| Town of Winnett | 0.018 | Limited data | Limited data |
| City of Big Timber | 0.087 | 39.7 | 6.98 |
| Town of Circle | 0.086 | Limited data | Limited data |
| City of Glasgow | | 18.4 | 1.84 |
| City of Harlem | 0.056 | 4.13 | 2.58 |
| Town of Jordan | 0.02 | 17.4 | 7.75 |
| Vaughn Cascade County Sewer District | 0.042 | No data | No data |
| Town of Alberton | 0.04 | 12.8 | 6.73 |
| Town of Belt | 0.026 | 14.6 | 3.71 |
| City of Fort Benton | 0.14 | 4.7 | Limited data |
| Town of Hobson | 0.087 | Limited data | Limited data |
| Town of Sunburst | 0.033 | Limited data | Limited data |
| Town of Hysham | 0.165 | No data | No data |

| | | | |
|---|---|---|---|
| Dawson County West Glendive | 1.02 | No data | No data |
| Absarokee Sewer District RSID 5&7 | 0.25 | No data | No data |
| Town of Valier | 0.0185 | 32.9 | 4.25 |
| Highwood County Water & Sewer District | 0.039 | No data | No data |
| Town of Stanford | 0.074 | Limited data | Limited data |
| Town of Big Sandy | 0.056 | No data | No data |
| Town of Denton | 0.05 | 9.8 | 1.31 |
| Gardiner Park County Water and Sewer District | 0.25 | 30.7 | 4.8 |
| City of Boulder | 0.103 | No data | Limited data |
| Town of Savage | 0.244 | Limited data | Limited data |
| Willow Creek Sewer District #306 | 1.24 | No data | No data |
| Sun Prairie Village County Water and Sewer District | 0.088 | 16.3 | 4.02 |
| Town of Twin Bridges | No Discharge | No data | No data |

| | | | |
|---|---|---|---|
| Stockett Water and Sewer District | 0.032 | No data | No data |
| Town of Kevin | 0.032 | No data | No data |
| City of Roundup | 0.13 | 26.3 | 3.6 |
| Town of Grass Range | No Discharge | No data | No data |
| Town of Plains | 0.083 | 36.1 | 6.5 |
| Town of Ennis | 0.122 | 11.9 | 5.6 |
| Sweetgrass Community County Water/Sewer District | No discharge | No data | No data |
| Town of Winifred | No discharge | No data | No data |
| City of Shelby | 0.31 | 9.54 | 2.67 |
| Town of Philipsburg | 0.12 | 3.65 | 1.6 |
| Town of Culbertson | 0.047 | No data | No data |

| Facility Assumptions | Remove |
| --- | --- |
| 3 cell enhanced aerated lagoon with UV disinfection | |
| 4 cell aerated system with UV disinfection. 6 I/P cells with option to go to 35 acre storage cell | |
| 1.5 mgd aerated lagoon with UV disinfection | |
| Single cell, 27 acre facultative lagoon with UV disinfection | |
| Facultative lagoon with UV disinfection | |
| 2 facultative lagoons with aerators/mixers | |
| Aerated lagoon, no disinfection | |
| 2 cell aeated/facultative lagoon with no disinfection | |
| Facultative lagoons | |
| 3 cell aerated lagoon with disinfection | |
| 3 cell aerated lagoon with UV disinfection | |
| Single cell aerated lagoon with polishing cell | |
| 2 cell facultative with seasonal operational alternatives to store in a single, bentonite lined stoarage pond (winter operation) or infiltrate through two RI cells (summer operation). The RI cells have an under-drain that captures treated discharged wastewater and routes it to the Madison River for final disposal. | |

2 cell facultative lagoon

Total retention, evaporative lagoon. One aerated lagoon, one storage lagoon, 2 evaporative lagoons

2 cell aerated lagoon with UV disinfection

2 cell facultative lagoon with no effluent disinfection

Aerated 3 cell system

4 cell aerated lagoons

3 cell facultative lagoon, total retention with no disinfection

Covered aerated lagoon with denitrfying filters

Aerated lagoon with disinfection

Facultative lagoons

3 cell aerated lagoon with no disinfection

3 cell aerated lagoon and no effluent disinfection

3 cell aerated/facultative lagoon with no disinfection. Outfall 001 discharges prior to facultative cell while 002 discharges from the facultative cell

2 Outfalls - 3 cell aerated lagoon

2cell facultative lagoon

3 cell facultative lagoon

2 cell facultative lagoon with aerator in 1st cell

2 cell facultative lagoon

3 cell aerated lagoon with UV disinfection

4 cell aerated lagoon with UV disinfection

3 cell aerated lagoon with UV disinfection

3 cell facultative lagoon

3 cell aerated/parially aerated with 4th facultative cell. Chlorine disinfection

3 cell facultative lagoon with no disinfection

2 aerated lagoons and 2 polishing ponds

3 cell facultative lagoon

Single cell lagoon

3 cell facultative lagoon with UV disinfection

2 cell accelerated facultive lagoon with UV disinfection

2 cell facultative lagoon, storage lagoon and land application system.

Facultative lagoon with UV disinfection

3 cell accelerated facultative lagoon with mixers in each cell

3 celled aerated lagoon system, includes sedimentation cell, effluent disinfection

2 cell facultative lagoon

Aerated lagoons with polishing cell

3 cell, lined, aerated lagoon with UV disinfection.

2 cell facultative lagoon, UV disinfection

Single cell facultative lagoon

3 cell, unlined, facultative lagoon with no disinfection.

2 cell facultative lagoon, no disinfection

3 cell aeated lagoon with UV disinfection

| Facility | Design Flow (MGD) | Average Flow (MGD) | TN (mg/l) | TP (mg/l) | Type |
|---|---|---|---|---|---|
| 1 | 0.05 | 0.038 | **15** | **5** | Non-nitrifying |
| 1 | 0.05 | 0.038 | 15 | 5 | Non-nitrifying |
| 1 | 0.05 | 0.038 | 15 | 5 | Non-nitrifying |
| 1 | 0.05 | 0.038 | 15 | 5 | Non-nitrifying |
| 1 | 0.05 | 0.038 | 15 | 5 | Non-nitrifying |
| 1 | 0.05 | 0.038 | 15 | 5 | Non-nitrifying |
| 2 | 0.275 | 0.159 | 15 | 5 | Non-nitrifying |
| 2 | 0.275 | 0.159 | 15 | 5 | Non-nitrifying |
| 2 | 0.275 | 0.159 | 15 | 5 | Non-nitrifying |
| 2 | 0.275 | 0.159 | 15 | 5 | Non-nitrifying |
| 2 | 0.275 | 0.159 | 15 | 5 | Non-nitrifying |
| 2 | 0.275 | 0.159 | 15 | 5 | Non-nitrifying |
| 3 | 0.4 | 0.3 | 15 | 5 | Non-nitrifying |
| 3 | 0.4 | 0.3 | 15 | 5 | Non-nitrifying |
| 3 | 0.4 | 0.3 | 15 | 5 | Non-nitrifying |
| 3 | 0.4 | 0.3 | 15 | 5 | Non-nitrifying |
| 3 | 0.4 | 0.3 | 15 | 5 | Non-nitrifying |
| 4 | 0.4 | 0.3 | 15 | 5 | Nitrifying |
| 4 | 0.4 | 0.3 | 15 | 5 | Nitrifying |
| 4 | 0.4 | 0.3 | 15 | 5 | Nitrifying |
| 4 | 0.4 | 0.3 | 15 | 5 | Nitrifying |
| 5 | 1.45 | 0.955 | 15 | 2.5 | Non-nitrifying |
| 5 | 1.45 | 0.955 | 15 | 2.5 | Non-nitrifying |
| 5 | 1.45 | 0.955 | 15 | 2.5 | Non-nitrifying |
| 5 | 1.45 | 0.955 | 15 | 2.5 | Non-nitrifying |
| 5 | 1.45 | 0.955 | 15 | 2.5 | Non-nitrifying |

| LOT | Approach | Assumptions |
|---|---|---|
| TP-0.1 | Lagoon + Chem precipit | Two-stage alum dosing, with media filter |
| TN-7.0 | Lagoon + TN add-on/retr | Air retrofit + denite filters |
| TN-7.0 | MLE Replacement | MLE to 5 ppm no filter |
| TN-3.0, TP-0.05 | Lagoon + Land Applicati | Spray system + land costs |
| TN-3.0, TP-0.1 | Mechanical BNR plant | MLE + EBPR + Chem precip/filter |
| TN-3.0, TP-0.1 | Mechanical BNR plant | MLE + EBPR + Chem precip/filter |
| TP-0.1 | Lagoon + Chem precipit | Two-stage alum dosing, with media filter |
| TN-7.0 | MLE Replacement | MLE to 5 ppm no filter |
| TN-7.0 | Lagoon + TN add-on/retr | Air retrofit + denite filters |
| TN-3.0, TP-0.05 | Lagoon + Land Applicati | Spray system + land costs |
| TN-3.0, TP-0.1 | Mechanical BNR plant | MLE + EBPR + Chem precip/filter |
| TP-0.1 | Lagoon + Chem precipit | Two-stage alum dosing, with media filter |
| TN-7.0 | MLE Replacement | MLE to 5 ppm no filter |
| TN-7.0 | Lagoon + TN add-on/retr | Air retrofit + denite filters |
| TN-3.0, TP-0.05 | Lagoon + Land Applicati | Spray system + land costs |
| TN-3.0, TP-0.1 | Mechanical BNR plant | MLE + EBPR + Chem precip/filter |
| TP-0.1 | Lagoon + Chem precipit | Two-stage alum dosing, with media filter |
| TN-7.0 | Lagoon + TN add-on/retr | Post-denite filter |
| TN-3.0, TP-0.05 | Lagoon + Land Applicati | Spray system + land costs |
| TN-3.0, TP-0.1 | Mechanical BNR plant | MLE + EBPR + Chem precip/filter |
| TP-0.1 | Lagoon + Chem precipit | Two-stage alum dosing, with media filter |
| TN-7.0 | MLE Replacement | MLE to 5 ppm no filter |
| TN-7.0 | Lagoon + TN add-on/retr | Air retrofit + denite filters |
| TN-3.0, TP-0.05 | Lagoon + Land Applicati | Spray system + land costs |
| TN-3.0, TP-0.1 | Mechanical BNR plant | MLE + EBPR + Chem precip/filter |

| Model | Design Flow | Average Daily Flow | Total Nitrogen | Total Phosphorus | Type | Capital Cost | O&M Cost | Annualized Costs[1] |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.05 | 0.038 | 15 | 5 | Non-nitrifying | $635,671 | $35,415 | $86,396 |
| 1 | 0.05 | 0.038 | 15 | 5 | Non-nitrifying | $4,509,005 | $21,788 | $383,410 |
| 1 | 0.05 | 0.038 | 15 | 5 | Non-nitrifying | $612,582 | $72,255 | $121,384 |
| 1 | 0.05 | 0.038 | 15 | 5 | Non-nitrifying | $742,343 | $35,800 | $95,336 |
| 1 | 0.05 | 0.038 | 15 | 5 | Non-nitrifying | $1,149,315 | $133,849 | $226,024 |
| 1 | 0.05 | 0.038 | 15 | 5 | Non-nitrifying | $2,911,271 | $230,438 | $463,922 |
| 2 | 0.275 | 0.159 | 15 | 5 | Non-nitrifying | $2,746,650 | $92,805 | $313,086 |
| 2 | 0.275 | 0.159 | 15 | 5 | Non-nitrifying | $8,632,944 | $80,826 | $773,188 |
| 2 | 0.275 | 0.159 | 15 | 5 | Non-nitrifying | $2,211,850 | $93,018 | $270,408 |
| 2 | 0.275 | 0.159 | 15 | 5 | Non-nitrifying | $3,757,650 | $196,285 | $497,649 |
| 2 | 0.275 | 0.159 | 15 | 5 | Non-nitrifying | $9,650,502 | $638,707 | $1,412,677 |
| 3 | 0.4 | 0.3 | 15 | 5 | Non-nitrifying | $3,813,776 | $116,194 | $422,059 |
| 3 | 0.4 | 0.3 | 15 | 5 | Non-nitrifying | $9,957,677 | $107,817 | $906,423 |
| 3 | 0.4 | 0.3 | 15 | 5 | Non-nitrifying | $3,209,729 | $135,963 | $393,383 |
| 3 | 0.4 | 0.3 | 15 | 5 | Non-nitrifying | $5,401,487 | $285,294 | $718,493 |
| 3 | 0.4 | 0.3 | 15 | 5 | Non-nitrifying | $12,558,772 | $799,121 | $1,806,335 |
| 4 | 0.4 | 0.3 | 15 | 5 | Nitrifying | $3,813,776 | $116,194 | $422,059 |
| 4 | 0.4 | 0.3 | 15 | 5 | Nitrifying | $659,448 | $81,293 | $134,180 |
| 4 | 0.4 | 0.3 | 15 | 5 | Nitrifying | $5,401,487 | $285,294 | $718,493 |
| 4 | 0.4 | 0.3 | 15 | 5 | Nitrifying | $12,558,772 | $799,121 | $1,806,335 |
| 5 | 1.45 | 0.955 | 15 | 2.5 | Non-nitrifying | $12,021,412 | $264,451 | $1,228,568 |
| 5 | 1.45 | 0.955 | 15 | 2.5 | Non-nitrifying | $16,265,012 | $290,266 | $1,594,720 |
| 5 | 1.45 | 0.955 | 15 | 2.5 | Non-nitrifying | $11,418,569 | $513,078 | $1,428,847 |
| 5 | 1.45 | 0.955 | 15 | 2.5 | Non-nitrifying | $18,996,513 | $1,031,323 | $2,554,843 |
| 5 | 1.45 | 0.955 | 15 | 2.5 | Non-nitrifying | $31,055,657 | $1,726,152 | $4,216,815 |

[1] Annualized costs are based on a discount rate, *i*, of 5%, and term, *n*, of 20 years.

| | | | | | |
|---|---|---|---|---|---|
| City of Choteau | 0.3 | Design | 3 | Chem precipitation | TP-0.1 |
| City of Choteau | 0.3 | Design | 3 | MLE Replacement | TN-7.0 |
| City of Choteau | 0.3 | Design | 3 | TN add-on/retrofit | TN-7.0 |
| City of Choteau | 0.3 | Design | 3 | Land Application | TN-3.0, TP-0.05 |
| City of Choteau | 0.3 | Design | 3 | Mechanical BNR plant | TN-3.0, TP-0.1 |
| City of Big Timber | 0.087 | Actual | 1 | Chem precipitation | TP-0.1 |
| City of Big Timber | 0.087 | Actual | 1 | MLE Replacement | TN-7.0 |
| City of Big Timber | 0.087 | Actual | 1 | TN add-on/retrofit | TN-7.0 |
| City of Big Timber | 0.087 | Actual | 1 | Land Application | TN-3.0, TP-0.05 |
| City of Big Timber | 0.087 | Actual | 1 | Mechanical BNR plant | TN-3.0, TP-0.1 |
| City of Big Timber | 0.087 | Actual | 1 | Modular BNR plant | TN-3.0, TP-0.1 |
| Highwood County Water & | 0.0258 | Design | 1 | Chem precipitation | TP-0.1 |
| Highwood County Water & | 0.0258 | Design | 1 | MLE Replacement | TN-7.0 |
| Highwood County Water & | 0.0258 | Design | 1 | TN add-on/retrofit | TN-7.0 |
| Highwood County Water & | 0.0258 | Design | 1 | Land Application | TN-3.0, TP-0.05 |
| Highwood County Water & | 0.0258 | Design | 1 | Mechanical BNR plant | TN-3.0, TP-0.1 |
| Highwood County Water & | 0.0258 | Design | 1 | Modular BNR plant | TN-3.0, TP-0.1 |
| Town of Big Sandy | 0.09 | Design | 1 | Chem precipitation | TP-0.1 |
| Town of Big Sandy | 0.09 | Design | 1 | MLE Replacement | TN-7.0 |
| Town of Big Sandy | 0.09 | Design | 1 | TN add-on/retrofit | TN-7.0 |
| Town of Big Sandy | 0.09 | Design | 1 | Land Application | TN-3.0, TP-0.05 |
| Town of Big Sandy | 0.09 | Design | 1 | Mechanical BNR plant | TN-3.0, TP-0.1 |
| Town of Big Sandy | 0.09 | Design | 1 | Modular BNR plant | TN-3.0, TP-0.1 |
| Town of Twin Bridges | 0.07 | Design | 1 | Chem precipitation | TP-0.1 |
| Town of Twin Bridges | 0.07 | Design | 1 | MLE Replacement | TN-7.0 |
| Town of Twin Bridges | 0.07 | Design | 1 | TN add-on/retrofit | TN-7.0 |
| Town of Twin Bridges | 0.07 | Design | 1 | Land Application | TN-3.0, TP-0.05 |
| Town of Twin Bridges | 0.07 | Design | 1 | Mechanical BNR plant | TN-3.0, TP-0.1 |
| Town of Twin Bridges | 0.07 | Design | 1 | Modular BNR plant | TN-3.0, TP-0.1 |
| Stockett Water and Sewer [ | 0.034 | Design | 1 | Chem precipitation | TP-0.1 |
| Stockett Water and Sewer [ | 0.034 | Design | 1 | MLE Replacement | TN-7.0 |
| Stockett Water and Sewer [ | 0.034 | Design | 1 | TN add-on/retrofit | TN-7.0 |
| Stockett Water and Sewer [ | 0.034 | Design | 1 | Land Application | TN-3.0, TP-0.05 |
| Stockett Water and Sewer [ | 0.034 | Design | 1 | Mechanical BNR plant | TN-3.0, TP-0.1 |
| Stockett Water and Sewer [ | 0.034 | Design | 1 | Modular BNR plant | TN-3.0, TP-0.1 |
| City of Roundup | 0.32 | Design | 2 | Chem precipitation | TP-0.1 |
| City of Roundup | 0.32 | Design | 2 | MLE Replacement | TN-7.0 |
| City of Roundup | 0.32 | Design | 2 | TN add-on/retrofit | TN-7.0 |
| City of Roundup | 0.32 | Design | 2 | Land Application | TN-3.0, TP-0.05 |
| City of Roundup | 0.32 | Design | 2 | Mechanical BNR plant | TN-3.0, TP-0.1 |
| Town of Ennis | 0.24 | Design | 2 | Chem precipitation | TP-0.1 |
| Town of Ennis | 0.24 | Design | 2 | MLE Replacement | TN-7.0 |
| Town of Ennis | 0.24 | Design | 2 | TN add-on/retrofit | TN-7.0 |
| Town of Ennis | 0.24 | Design | 2 | Land Application | TN-3.0, TP-0.05 |
| Town of Ennis | 0.24 | Design | 2 | Mechanical BNR plant | TN-3.0, TP-0.1 |

| | |
|---|---|
| $2,860,332 | $87,145 |
| $7,468,258 | $80,863 |
| $2,407,297 | $101,972 |
| $4,051,115 | $213,971 |
| $9,419,079 | $599,341 |
| $1,474,756 | $82,163 |
| $10,460,892 | $50,548 |
| $1,421,191 | $167,632 |
| $1,722,236 | $83,055 |
| $6,754,148 | $534,617 |
| $2,666,411 | $310,530 |
| $328,006 | $18,274 |
| $2,326,647 | $11,242 |
| $316,092 | $37,284 |
| $383,049 | $18,473 |
| $1,502,216 | $118,906 |
| $593,047 | $69,066 |
| $1,144,207 | $63,747 |
| $8,116,210 | $39,218 |
| $1,102,648 | $130,059 |
| $1,336,218 | $64,439 |
| $5,240,288 | $414,789 |
| $2,068,767 | $240,928 |
| $889,939 | $49,581 |
| $6,312,607 | $30,503 |
| $857,615 | $101,157 |
| $1,039,280 | $50,120 |
| $4,075,779 | $322,614 |
| $1,609,041 | $187,389 |
| $432,256 | $24,082 |
| $3,066,124 | $14,816 |
| $416,556 | $49,133 |
| $504,793 | $24,344 |
| $1,979,664 | $156,698 |
| $781,534 | $91,017 |
| $3,196,102 | $107,991 |
| $10,045,608 | $94,052 |
| $2,573,789 | $108,239 |
| $4,372,538 | $228,405 |
| $11,229,675 | $743,223 |
| $2,397,077 | $80,993 |
| $7,534,206 | $70,539 |
| $1,930,342 | $81,179 |
| $3,279,403 | $171,304 |
| $8,422,256 | $557,417 |

| |
|---|
| $316,544 |
| $679,817 |
| $295,037 |
| $538,870 |
| $1,354,751 |
| $200,438 |
| $889,511 |
| $281,611 |
| $221,179 |
| $1,076,300 |
| $524,376 |
| $44,580 |
| $197,840 |
| $62,634 |
| $49,193 |
| $239,384 |
| $116,628 |
| $155,512 |
| $690,138 |
| $218,491 |
| $171,604 |
| $835,060 |
| $406,843 |
| $120,954 |
| $536,774 |
| $169,938 |

$133,470

$649,491

$316,434

$58,749

$260,719

$82,541

$64,828

$315,467

$153,696

$364,319

$899,710

$314,657

$579,082

$1,643,843

$273,239

$674,782

$235,993

$434,312

$1,232,882

| Facility | Actual Average Daily Flow, AADF (MGD) | LOT TP upgrade to 0.1 mg/L cost/year | $/gallon per day treated | LOT TN MLE replacement to 7.0 mg/L cost/year |
|---|---|---|---|---|
| City of Choteau | 0.47 | $2,860,332 | $6 | $7,468,258 |
| City of Big Timber | 0.087 | $1,474,756 | $17 | $10,460,892 |
| Highwood County Water & Sewer District | 0.039 | $328,006 | $8 | $2,326,647 |
| Town of Big Sandy | 0.056 | $1,144,207 | $20 | $8,116,210 |
| Town of Twin Bridges | No Discharge | $889,939 | NA | $6,312,607 |
| Stockett Water and Sewer District | 0.032 | $432,256 | $14 | $3,066,124 |
| City of Roundup | 0.13 | $3,196,102 | $25 | $10,045,608 |
| Town of Ennis | 0.122 | $2,397,077 | $20 | $7,534,206 |

Numerical Value

Where no actual flow data could be found, the design flow was used

| $/gallon per day treated | LOT TN add-on retrofit/upgrade to 7.0 mg/L cost/year | $/gallon per day treated | LOT TN upgrade to 3.0 mg/L, 0.5 mg/L TP cost/year | $/gallon per day treated |
|---|---|---|---|---|
| $16 | $2,407,297 | $5 | $4,051,115 | $9 |
| $120 | $1,421,191 | $16 | $1,722,236 | $20 |
| $60 | $316,092 | $8 | $383,049 | $10 |
| $145 | $1,102,648 | $20 | $1,336,218 | $24 |
| NA | $857,615 | NA | $1,039,280 | NA |
| $96 | $416,556 | $13 | $504,793 | $16 |
| $77 | $2,573,789 | $20 | $4,372,538 | $34 |
| $62 | $1,930,342 | $16 | $3,279,403 | $27 |

| LOT TN upgrade to 3.0 mg/L, 0.1 mg/L TP cost/year Mechanical BNR | $/gallon per day treated | LOT TN upgrade to 3.0 mg/L, 0.1 mg/L TP cost/year Modular BNR | $/gallon per day treated |
|---|---|---|---|
| $9,419,079 | $20 | NA | NA |
| $6,754,148 | $78 | $2,666,411 | $31 |
| $1,502,216 | $39 | $593,047 | $15 |
| $5,240,288 | $94 | $2,068,767 | $37 |
| $4,075,779 | NA | $1,609,041 | NA |
| $1,979,664 | $62 | $781,534 | $24 |
| $11,229,675 | $86 | | |
| $8,422,256 | $69 | | |

| Community | County | Communit | Available I | Average In | Threshold |
|---|---|---|---|---|---|
| City of Red Lodge | Carbon | Major | 5 | 1.8 | 1.3 |
| City of Sidney | Richland | Major | 4 | 1.3 | 0.8 |
| City of Deer Lodge | Powell | Major | 5 | 1.8 | 1.3 |
| City of Choteau | Teton | Minor | 4 | 1.3 | 0.8 |
| Town of Whitehall | Jefferson | Minor | 4 | 1.3 | 0.8 |
| City of Cut Bank | Glacier | Minor | 4 | 1.5 | 1 |
| Town of Joliet | Carbon | Minor | 4 | 1.3 | 0.8 |
| Town of Bridger | Carbon | Minor | 4 | 1.8 | 1.3 |
| Town of Chester | Liberty | Minor | 4 | 1 | 0.5 |
| City of Harlowton | Wheatland | Minor | 4 | 1.5 | 1 |
| Town of Ekalaka | Carter | Minor | 4 | 1.3 | 0.8 |
| City of Malta | Phillips | Minor | 4 | 1.5 | 1 |
| Town of Three Forks | Gallatin | Minor | 4 | 1.5 | 1 |
| Town of Ryegate | Golden Valley | Minor | 4 | 2 | 1.5 |
| Town of Wibaux | Wibaux | Minor | 4 | 1.3 | 0.8 |
| Town of Superior | Mineral | Minor | 4 | 1.5 | 1 |
| City of White Sulphur Spring | Meagher | Minor | 4 | 1.3 | 0.8 |
| Town of Winnett | Petroleum | Minor | 4 | 2 | 1.5 |
| City of Big Timber | Sweet Grass | Minor | 4 | 1.3 | 0.8 |
| Town of Circle | McCone | Minor | 4 | 1.3 | 0.8 |
| City of Glasgow | Valley | Minor | 5 | 1.6 | 1.1 |
| City of Harlem | Blaine | Minor | 4 | 1.5 | 1 |
| Town of Jordan | Garfield | Minor | 4 | 1 | 0.5 |
| Vaughn Cascade County Sew | Cascade | Minor | 2 | 2 | 1.5 |
| City of Dillon | Beaverhead | Minor | 5 | 1.6 | 1.1 |
| Town of Alberton | Mineral | Minor | 4 | 1.5 | 1 |
| Town of Belt | Cascade | Minor | 4 | 1.3 | 0.8 |
| City of Fort Benton | Chouteau | Minor | 4 | 1.3 | 0.8 |
| Town of Hobson | Judith Basin | Minor | 4 | 1.5 | 1 |
| Town of Sunburst | Toole | Minor | 4 | 1.5 | 1 |
| Town of Hysham | Treasure | Minor | 4 | 1.5 | 1 |
| Dawson County West Glend | Dawson | Minor | 2 | 1.5 | 1 |
| Absarokee Sewer District RS | Stillwater | Minor | 2 | 1.5 | 1 |
| Town of Valier | Pondera | Minor | 4 | 1.8 | 1.3 |
| Highwood County Water & S | Chouteau | Minor | 2 | 1.5 | 1 |
| Town of Stanford | Judith Basin | Minor | 4 | 1.5 | 1 |
| Town of Big Sandy | Chouteau | Minor | 4 | 1 | 0.5 |
| Town of Denton | Fergus | Minor | 4 | 1.3 | 0.8 |
| City of East Helena | Lewis & Clark | Minor | 4 | 1.3 | 0.8 |
| Gardiner Park County Water | Park | Minor | 2 | 2.5 | 2 |
| City of Boulder | Jefferson | Minor | 4 | 1.3 | 0.8 |
| Town of Savage | Richland | Minor | 2 | 1 | 0.5 |
| Willow Creek Sewer District | Gallatin | Minor | 2 | 1.5 | 1 |
| Sun Prairie Village County W | Cascade | Minor | 2 | 2 | 1.5 |

| | | | | | |
|---|---|---|---|---|---|
| Town of Twin Bridges | Madison | Minor | 4 | 1.5 | 1 |
| Stockett Water and Sewer D | Cascade | Minor | 2 | 2.5 | 2 |
| Town of Kevin | Toole | Minor | 4 | 1.8 | 1.3 |
| City of Roundup | Musselshell | Minor | 5 | 1.6 | 1.1 |
| Town of Grass Range | Fergus | Minor | 4 | 1.3 | 0.8 |
| Town of Plains | Sanders | Minor | 4 | 1.5 | 1 |
| Town of Ennis | Madison | Minor | 4 | 1.5 | 1 |
| Sweetgrass Community Cou | Toole | Minor | 2 | 2 | 1.5 |
| Town of Winifred | Fergus | Minor | 4 | 1.8 | 1.3 |
| City of Shelby | Toole | Minor | 5 | 1.8 | 1.3 |
| Town of Philipsburg | Granite | Minor | 4 | 1.8 | 1.3 |
| Town of Culbertson | Roosevelt | Minor | 4 | 1.8 | 1.3 |

| Facility | Actual TN (mg/l) | Actual TP (mg/l) |
|---|---|---|
| City of Big Timber | 39.7 | 6.98 |
| City of Choteau | 12 | 1.8 |
| City of Roundup | 26.3 | 3.6 |
| Highwood County Water & Sewer District | No data | No data |
| Stockett Water and Sewer District | No data | No data |
| Town of Big Sandy | No data | No data |
| Town of Ennis | 11.9 | 5.6 |
| Town of Twin Bridges | No data | No data |

| Facility Assumptions | LOT TP upgrade to 0.1 mg/L cost/year | LOT TN MLE replacement to 7.0 mg/L cost/year |
|---|---|---|
| 4 cell aerated lagoons | $200,438 | $889,511 |
| Single cell, 27 acre facultative lagoon with UV disinfection | $316,544 | $679,817 |
| 3 celled aerated lagoon system, includes sedimentation cell, effluent disinfection | $364,319 | $899,710 |
| 3 cell aerated lagoon with UV disinfection | $44,580 | $197,840 |
| Facultative lagoon with UV disinfection | $58,749 | $260,719 |
| 3 cell aerated/parially aerated with 4th facultative cell. Chlorine disinfection | $155,512 | $690,138 |
| 3 cell, lined, aerated lagoon with UV disinfection. | $273,239 | $674,782 |
| 2 cell facultative lagoon, storage lagoon and land application system. | $120,954 | $536,774 |

| LOT TN add-on/retrofit to 7.0 mg/L cost/year | LOT TN upgrade to 3.0 mg/L, 0.05 mg/L TP cost/year | LOT TN upgrade to 3.0 mg/L, 0.1 mg/L TP cost/year Mechanical BNR | LOT TN upgrade to 3.0 mg/L, 0.1 mg/L TP cost/year Modular | MHI (MT Department of Commerce 2013 inflation adjusted dollars) |
|---|---|---|---|---|
| $281,611 | $221,179 | $1,076,300 | $524,376 | $37,619 |
| $295,037 | $538,870 | $1,354,751 | #N/A | $36,597 |
| $314,657 | $579,082 | $1,643,843 | #N/A | $31,111 |
| $62,634 | $49,193 | $239,384 | $116,628 | $50,625 |
| $82,541 | $64,828 | $315,467 | $153,696 | $53,750 |
| $218,491 | $171,604 | $835,060 | $406,843 | $32,500 |
| $235,993 | $434,312 | $1,232,882 | #N/A | $35,521 |
| $169,938 | $133,470 | $649,491 | $316,434 | $42,679 |
| | | | | Incremental MHI % change |

| Population | Households | Current sewer bill/year | Current Sewer Rate | Achieving LOT TP upgrade to 0.1 mg/L %MHI | Achieving LOT TN MLE upgrade to 7.0 mg/L %MHI |
|---|---|---|---|---|---|
| 1,650 | 640 | $268 | 0.71 | 1.54 | 4.41 |
| 1,781 | 690 | #N/A | #N/A | #N/A | #N/A |
| 1,931 | 748 | $333 | 1.07 | 2.64 | 4.94 |
| 280 | 109 | #N/A | #N/A | #N/A | #N/A |
| 210 | 81 | $300 | 0.56 | 1.90 | 6.52 |
| 700 | 271 | $188 | 0.58 | 2.34 | 8.41 |
| 840 | 326 | $508 | 1.43 | 3.79 | 7.27 |
| 424 | 164 | $212 | 0.50 | 2.22 | 8.15 |

for those municipalities where current sewer rates are not known

| Achieving LOT TN add-on/retrofit to 7.0 mg/L %MHI | Achieving LOT TP upgrade to 0.1 mg/L %MHI and Achieving LOT TN MLE upgrade to 7.0 mg/L %MHI | Threshold derived from EPA secondary score and sliding scale | Achieving LOT TP upgrade to 0.1 mg/L %MHI and Achieving LOT TN add-on/retrofit to 7.0 mg/L %MHI | Threshold derived from EPA secondary score and sliding scale | Achieving LOT TN upgrade to 3.0 mg/L, 0.05 mg/L TP %MHI |
|---|---|---|---|---|---|
| 1.88 | 5.24 | 0.80 | 2.71 | 0.80 | 1.63 |
| #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| 2.42 | 6.50 | 1.10 | 3.99 | 1.10 | 3.56 |
| #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| 2.44 | 7.86 | 2.00 | 3.79 | 2.00 | 2.04 |
| 3.06 | 10.17 | 0.50 | 4.82 | 0.50 | 2.53 |
| 3.47 | 9.63 | 1.00 | 5.83 | 1.00 | 5.19 |
| 2.92 | 9.87 | 1.00 | 4.64 | 1.00 | 2.40 |

| Threshold derived from EPA secondary score and sliding scale | Achieving LOT TN upgrade to 3.0 mg/L, 0.1 mg/L TP Mechanical BNR %MHI | Threshold derived from EPA secondary score and sliding scale | Achieving LOT TN upgrade to 3.0 mg/L, 0.1 mg/L TP cost/year Modular %MHI | Threshold derived from EPA secondary score and sliding scale |
|---|---|---|---|---|
| 0.80 | 5.18 | 0.80 | 2.89 | 0.80 |
| #N/A | #N/A | #N/A | #N/A | #N/A |
| 1.10 | 8.13 | 1.10 | #N/A | #N/A |
| #N/A | #N/A | #N/A | #N/A | #N/A |
| 2.00 | 7.77 | 2.00 | 4.07 | 2.00 |
| 0.50 | 10.05 | 0.50 | 5.19 | 0.50 |
| 1.00 | 12.09 | 1.00 | #N/A | #N/A |
| 1.00 | 9.76 | 1.00 | 5.01 | 1.00 |

| Estimated Population Change 2010-2015 (Census Estimates) | Percent Change | Threshold MHI derived from EPA secondary score and sliding scale | Incremental increase Achieving LOT TP upgrade to 0.1 mg/L %MHI | Incremental increase Achieving LOT TN MLE upgrade to 7.0 mg/L %MHI |
|---|---|---|---|---|
| 7 | 0.4 | 0.8 | #N/A | #N/A |
| 12 | 0.7 | 0.8 | 1.25 | 2.69 |
| 48 | 2.7 | 1.1 | #N/A | #N/A |
| #N/A | #N/A | 1 | 0.81 | 3.60 |
| #N/A | #N/A | 2 | #N/A | #N/A |
| -5 | -0.8 | 0.5 | #N/A | #N/A |
| 46 | 5.5 | 1 | #N/A | #N/A |
| 19 | 5.1 | 1 | #N/A | #N/A |

| Incremental increase Achieving LOT TN MLE upgrade to 7.0 mg/L %MHI | Incremental increase Achieving LOT TP upgrade to 0.1 mg/L %MHI and Incremental increase Achieving LOT TN MLE upgrade to 7.0 mg/L %MHI | Threshold derived from EPA secondary score and sliding scale | Incremental increase Achieving LOT TP upgrade to 0.1 mg/L %MHI and Incremental increase Achieving LOT TN MLE upgrade to 7.0 mg/L %MHI | Threshold derived from EPA secondary score and sliding scale | Incremental increase Achieving LOT TN upgrade to 3.0 mg/L, 0.05 mg/L TP %MHI |
|---|---|---|---|---|---|
| #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| 1.17 | 3.94 | 0.80 | 2.42 | 0.80 | 2.13 |
| #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| 1.14 | 4.41 | 1.00 | 1.95 | 1.00 | 0.90 |
| #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |

| Threshold derived from EPA secondary score and sliding scale | Incremental increase Achieving LOT TN upgrade to 3.0 mg/L, 0.1 mg/L TP Mechanical BNR %MHI | Threshold derived from EPA secondary score and sliding scale | Incremental increase Achieving LOT TN upgrade to 3.0 mg/L, 0.1 mg/L TP cost/year Modular %MHI | Threshold derived from EPA secondary score and sliding scale |
|---|---|---|---|---|
| #N/A | #N/A | #N/A | #N/A | #N/A |
| 0.80 | 5.36 | 0.80 | #N/A | #N/A |
| #N/A | #N/A | #N/A | #N/A | #N/A |
| 1.00 | 4.36 | 1.00 | 2.12 | 1.00 |
| #N/A | #N/A | #N/A | #N/A | #N/A |
| #N/A | #N/A | #N/A | #N/A | #N/A |
| #N/A | #N/A | #N/A | #N/A | #N/A |
| #N/A | #N/A | #N/A | #N/A | #N/A |